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REMARKS

Claims 1 through 16 and new Claims 17 and 18 are pending in the application.

Claim 1 has been amended to reflect that the base layer (B) advantageously comprises thermoplastic polyester and that the overlayer (A) comprises a mixture of the thermoplastic polyester used in layer (B), along with poly(m-xylenedipamide). Support for this amendment can be found in the Application-as-filed, for example on Page 3, lines 18 through 21 and Page 8, lines 3 through 4.

Claim 1 has also been amended to recite that the films of the invention advantageously exhibit an oxygen transmission of less than $50 \text{ cm}^3/(\text{m}^2 \cdot \text{bar} \cdot \text{d})$ based on 12 μm thick film and an interlaminar adhesion of greater than 0.5 N/25 mm. Support for this amendment can be found in the Application-as-filed, for example on Page 14, Table 1.

Claim 2 has been amended to reflect that the overlayer (A) advantageously comprises up to 95 % by weight of poly(m-xylenedipamide) and from 5 to 95% thermoplastic polyester. Support for this amendment can be found in the Application-as-filed, for example on Page 14, Table 1.

Claims 6 and 13 have been canceled, as their subject matter has been incorporated into Claim 1.

The dependencies of Claims 7, 8 and 9 have been amended to conform to the foregoing amendments.

Claim 15 has been cancelled, without prejudice or disclaimer to the filing of continuing applications thereon.

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Claims 17 and 18 have been added to complete the record for examination and highlight advantageous embodiments of the invention.

Claim 17 is directed to advantageous embodiments of the invention in which the planar orientation of said film is less than 0.160. Support for Claim 17 can be found in the Application-as-filed, for example on Page 12, lines 7 through 9.

Claim 18 is directed to advantageous embodiments of the invention in which the overlayer (A) is directly disposed on the base layer (B). Support for Claim 18 can be found in the Application-as-filed, for example on Page 18, lines 7 through 29.

Reexamination and reconsideration of this application, withdrawal of all rejections, and formal notification of the allowability of the pending claims are earnestly solicited in light of the remarks which follow.

Affirmation of Election

The claims have been restricted into two groups, Group I, i.e. Claims 1 through 14 and 16, and Group II, i.e. Claim 15. The claims of Group I are directed to the products of the invention. The claims of Group II are directed to methods of the invention.

A provisional election was made with traverse to prosecute the claims of Group I on October 12, 2004. Applicants hereby affirm the provisional election of Group I, i.e. Claims 1 through 14 and 16. Applicants respectfully affirm the provisional election without traverse, however. Claim 15 has been canceled in light of the foregoing election, without prejudice or disclaimer to the filing of continuing applications thereon.

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Section 112 Rejection

Claim 11 stands rejected under 35 USC § 112, due to a lack of antecedent basis. Claim 1 has been amended to recite the presence of thermoplastic polyester within the base layer. As noted above, support for this amendment can be found in the Application-as-filed. Applicants accordingly respectfully request withdrawal of this rejection.

The Claimed Invention is Patentable
in Light of the Art of Record

Claims 1 through 14 and 16 stand rejected as anticipated by United States Patent No. 6,562,276 to Shelby et al. ("US 276").

It may be useful to briefly consider the invention before addressing the merits of the rejection.

Barrier films are generally known. Typically, barrier properties are imparted to biaxially oriented films by coating and the like. (The Examiner's attention is kindly directed to the Application-as-filed on Page 1, lines 14 – 19)

In contrast to such conventional coated barrier films, Applicants have unexpectedly found that uncoated, multilayered biaxially oriented films can be produced that exhibit a heretofore unknown balance of barrier properties and interlaminar adhesion.

Consequently, the claims are directed to polyester films having a base layer (B) and at least one overlayer (A), in which the base layer (B) includes thermoplastic polyester and the overlayer (A) includes a mixture of thermoplastic polyester and poly(m-xyleneadipamide). The resulting films exhibit an oxygen transmission of less than $50 \text{ cm}^3/(\text{m}^2 \cdot \text{bar} \cdot \text{d})$ based on $12 \mu\text{m}$

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thick film and further have an interlaminar adhesion of greater than 0.5 N/25 mm. In particularly advantageous embodiments, the overlayer (A) includes from 5 to 95 % by weight of poly(m-xylylenedipamide) and from 5 to 95% thermoplastic polyester, as recited in Claim 2.

In further beneficial embodiments, the base layer (B) also includes poly(m-xylylenedipamide), as recited in Claim 3. In particularly advantageous aspects of such embodiments, the base layer (B) includes up to 30% by weight of poly(m-xylylenedipamide), as recited in Claim 4.

Applicants have further determined that films having a planar orientation of less than 0.160 provide good optical properties, such as low opacity, and good process reliability. Polyester films having a planar orientation of less than 0.160 are recited in Claim 17.

US 276 does not teach or suggest the claimed invention.

US 276 is generally directed to the elimination of melt flow defects within articles that include both a structural layer and a performance layer. (Col. 1, lines 13 – 16 and Col. 2, lines 30 – 33). More particularly, US 276 is directed to the selection of resin viscosities, elasticity parameters and process conditions for structural and performance polymer layers such that interfacial stresses between the layers are eliminated within the resulting article. (Col. 3, lines 16 – 20 and Col. 5, lines 37 - 42). US 276 expressly notes that it does not address the interlaminar adhesion of the resulting article. (Col. 12, line 64 – Col. 13, line 5). US 276 instead recommends tie layers to improve interlaminar adhesion. (Col. 13, lines 7 – 8).

US 276 generally indicates that its articles may be formed by either injection molding or coextrusion. (Col. 3, lines 37 – 42). Although providing a number of working examples, US 276 makes no mention of biaxial orientation. (Please note in particular Examples 2 through 5 at Col. 21, line 58 – Col. 24, line 2). US 276 further generally recommends positioning the

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performance layer within the interior of the resulting article. (Col. 23, lines 34 – 35 and lines 60 – 61).

US 276 repeatedly makes a sharp distinction between the functions, and hence compositions, of the structural and performance layers. (Col. 2, lines 30 – 33; Col. 5, Col. 5, lines 37 – 41; Col. 18, lines 1 – 5 and lines 60 – 63). Suitable polymers used to form the structural layer include polyesters, such as PET. (Col. 18, lines 1 – 59). Suitable polymers used to form the performance layer include a laundry list of barrier polymers, culminating in the most preferred selection of saponified EVOH. (Col. 18, line 60 through Col. 20, line 41). US 276 notes that one or more of the barrier polymers can be included within the performance layer, in unspecified amounts. (Col. 19, lines 6 – 11). US 276 does not, however, recommend the use of the same polymer within the structural and performance layer. US 276's emphasis on discrete structural and performance layers, each providing a different function, would instead teach away from such constructions.

The impetus of US 276 lies in the matching of the viscous and elastic properties of discrete performance and structural layers to form reduced-stress barrier films. In contrast, the claimed invention tailors the compositions of film layers to provide barrier films exhibiting a highly advantageous balance of barrier properties and interlaminar adhesion.

Consequently, US 276 does not teach or suggest the recited films including a base layer (B) formed from thermoplastic polyester and overlayer (A) that includes a mixture of thermoplastic polyester along with poly(m-xylenedipamide). And US 276 most certainly does not teach or suggest that such films exhibit an oxygen transmission of less than $50 \text{ cm}^3/(\text{m}^2 \cdot \text{bar} \cdot \text{d})$ and an interlaminar adhesion of greater than 0.5 N/25 mm.

Nor does US 276 teach or suggest such films in which the overlayer (A) includes from 5 to 95 % by weight of poly(m-xylenedipamide) and from 5 to 95% of the thermoplastic polyester, as recited in Claim 2.

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US 276 similarly does not teach or suggest polyester films in which both the overlayer (A) and the base layer (B) include poly(m-xylenedipamide), as recited in Claim 3. Thus US 276 can not teach or suggest such films in which the base layer includes up to 30% by weight of poly(m-xylenedipamide), as recited in Claim 4.

US 276 merely generically notes that its articles may be coextruded. Consequently, US 276 further does not teach or suggest the recited polyester films having a planar orientation of less than 0.160, as recited in Claim 17.

US 276 also notes the use of a separate tie layer to address adhesional issues. US 276 thus does not teach or suggest the recited overlayer (A) disposed directly on the base layer (B) to provide films exhibiting the recited interlaminar adhesion, as provided in Claim 18. Instead, US 276 teaches away from such films.

Accordingly, Applicants respectfully submit that Claims 1 through 5, 7 through 12, 14 and 16 through 18 are patentable in light of US 276.

CONCLUSION

It is respectfully submitted that Applicants have made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all of pending Claims 1 through 5, 7 through 12, 14 and 16 through 18 are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that extensions of time or fees are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time and/or fees are necessary to allow consideration of this paper, such

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extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required is hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

Cathy Moore

Cathy R. Moore
Reg. No. 45,764

ProPat, L.L.C.
425-C South Sharon Amity Road
Charlotte, NC 28211-2841
Telephone: (704) 365-4881
Fax: (704) 365-4851
Customer No. 38263

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Claire Wygand

Claire Wygand